

AGASTHYA OMKUMAR

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EDUCATION

Defence Institute of Advanced Technology (DIAT)	2022 - 2024
M.Sc. – Applied Mathematics	Pune, India
BNM Institute of Technology, VTU	2017 - 2021
B.Tech – Mechanical Engineering	Bangalore, India

EXPERIENCE

CAIR, DRDO	Aug 2023 - Mar 2024
Project Trainee	Bengaluru, KA
<ul style="list-style-type: none"><li>Designed &amp; implemented a multi-object tracking pipeline for maritime surveillance, integrating visual and AIS sensor data; reduced false-positive rate by 22 % through custom data-fusion algorithms.</li><li>Automated performance reporting with a Streamlit dashboard that visualised key metrics (precision, recall, latency) for stakeholders, cutting manual reporting time by 40 %.</li><li>Optimised model training on GPU-enabled workstations and edge devices, achieving a 15 % speed-up in inference while maintaining &gt; 90 % detection accuracy.</li><li>Collaborated with cross-functional engineers to translate technical results into concise executive briefs, strengthening communication between R&amp;D; and senior leadership.</li></ul>	
Cognizant Technology Solutions	Mar 2021 - Sept 2021
Intern	Bengaluru, KA
<ul style="list-style-type: none"><li>Completed intensive .NET and full-stack development training; built a SQL-driven data-warehouse prototype for internal reporting.</li><li>Up-skilled in Python for data extraction, cleaning, and exploratory analysis, laying the groundwork for future analytics-focused roles.</li></ul>	

SKILLS

- Digital-Marketing & Campaign Management:** SEM, PPC, Google Ads (fundamental knowledge), SEO basics, keyword research, on-page optimisation, Email-marketing concepts, A/B testing, Social-media analytics, content performance tracking, Campaign-budget monitoring, ROI analysis
- Analytics & Data Platforms:** Google Analytics, Tag Manager (hands-on for tracking), Data-visualisation (Streamlit, Tableau, Power BI), Marketing-operations reporting, KPI dashboards, Campaign-level attribution modelling, Statistical modelling, hypothesis testing
- Technical & Programming:** Python, SQL, R, MATLAB, Pandas, NumPy, Scikit-Learn, TensorFlow, PyTorch, REST APIs, Flask, FastAPI, Git, Docker, Azure, AWS, Linux (Ubuntu), Windows

PROJECTS

- Fund-Trail Analysis & Prediction Tool – Flask & ML (2023):** Developed a Flask web application that ingests mutual-fund transaction data, applies Hidden Markov Models and CTGAN for synthetic data generation to forecast fund-flow trends. Ranked Top 5 at KAVACH Cybersecurity Hackathon among 3,900 national teams.
- Sign-Language Recognition System – Computer Vision (2022):** Built an LRCN-based model achieving 94 % accuracy on a custom gesture dataset; deployed via a Streamlit UI for real-time inference.
- HR Attrition Analytics (IBM Dataset) – Exploratory Data Analysis (2022):** Conducted end-to-end analysis identifying high-impact variables influencing employee turnover and delivered actionable recommendations, adaptable to customer churn or campaign-response modelling.